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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 10/777,495
Filing Date: February 12, 2004
Appellant(s): WIRTH ET AL.

Lyndanne M. Whalen
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 22 June 2007 appealing from the Office action mailed 23 January 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct. It is noted that the summary is directed solely to the independent claim 1.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

| | | |
|---|---|---|
| 4,944,599 | Soechtig | 07-1990 |
| 5,240,969 | Brown | 08-1993 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Soechtig (U.S. Patent 4,944,599). Regarding Claim 1, Soechtig shows that it is known to carry out a process for producing a polyurethane molding (Column 1, lines 41-42) comprising (a) conveying

in shot operation at least one isocyanate component and at least one polyol component for a predetermined time-interval into a mixing chamber at predetermined volume flow rate for each component and predetermined pressure for each component (Column 4, lines 52-54; Column 6, lines 5-10); (b) mixing the isocyanate and polyol in the mixing chamber to form a polyurethane reaction mixture (Column 4, lines 53-54); and (c) discharging the polyurethane reaction mixture into a mold (Column 4, lines 55-56), and in which (1) prior to (a), the isocyanate and polyol are conveyed in circuit through circulation lines between the mixing chamber and their respective storage vessels (Figure 1, 6=storage vessels, 7=mixing chamber, circulation lines between 6 and 7 shown), (2) the pressure of the isocyanate and of the polyol are measured by means of pressure sensors and transmitted to a control device (Column 7, lines 3-5); (3) the volumetric flow rates of the isocyanate and polyol are adjusted while being conveyed through the circulation lines in such a way that the pressure of each of the isocyanate and polyol in the circuit corresponds to the predetermined pressures of the components for shot operation (Column 7, lines 5-15, 26-30); and (4) the volumetric flow rates of the isocyanate and polyol are adjusted by the control device during change-over from circulatory mode of operation to shot operation by adjustment of drive units of metering elements for the isocyanate and polyol (Column 7, lines 15-30, 43-62; Column 8, lines 1-22).

Regarding Claim 4, Soechtig shows the process as claimed as discussed in the rejection of Claim 1 above, including a method in which the pressure of the isocyanate and of the polyol both during recirculation and during shot operation lie within a range from 3 bar to 600 bar (Column 5, lines 33-40).

Regarding Claim 5, Soechtig shows the process as claimed as discussed in the rejection of Claim 1 above, including a method in which the pressure of the isocyanate and of the polyol both during recirculation and during shot operation lie within a range from 50 bar to 350 bar (Column 5, lines 33-40).

Regarding Claim 6, Soechtig shows the process as claimed as discussed in the rejection of Claim 1 above, including a method in which the pressure of the isocyanate and of the polyol both during recirculation and during shot operation lie within a range from 100 bar to 250 bar (Column 5, lines 33-40).

Regarding Claim 7, Soechtig shows the process as claimed as discussed in the rejection of Claim 1 above, including a method in which the volumetric flow rate of the isocyanate and of the polyol are registered permanently by a volumetric flow meter, the flow rates are signaled to the control system by means of a pulse line and any flow rate exceeding a set tolerance which arises during a shot is ascertained and corrected for subsequent shots (Column 3, lines 21-42).

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (U.S. Patent 5,240,969).

Regarding Claim 2, Soechtig shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using additives added to his polyol and isocyanate. Brown shows that it is known to carry out a method in which additives in addition to the polyol and isocyanate are employed (Abstract). Brown and Soechtig are combinable because they are concerned with a similar technical field, namely, methods of molding polyol and isocyanate mixtures. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Brown's additives in Soechtig's molding process in order to produce a reinforced article.

Regarding Claim 3, Soechtig shows the process as claimed as discussed in the rejection of Claim 2 above, but he does not show using a dye added to his polyol and isocyanate. Brown shows that it is known to carry out a method in which a dye is employed (Column 3, lines 38-50). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Brown's dye in Soechtig's molding process in order to produce an article having desired color characteristics.

**(10) Response to Argument**

Applicant contends that Soechtig does not show the claimed invention because Soechtig does not show adjustment of volumetric flow rates while the material is being conveyed through the circulation lines to the volumetric flow rate during show operation. This is not persuasive because Soechtig discusses a flow meter (28) in the circulation loop whose data is used to adjust the flow rate through the pump (9) which is also in the circulation loop (See Soechtig, Column 7, lines 3-30). Therefore, it is maintained that Soechtig clearly shows adjusting the volumetric flow rates while the material is being conveyed through the circulation lines.

Applicant contends that Soechtig does not show the claimed invention because Soechtig does not show adjustment of the flow rates to maintain a constant pressure during a shot operation. This is not persuasive because this maintenance of constant pressure is not claimed. However, for the sake of answering applicant's argument, it is noted that Soechtig does show achievement of constant pressure using his feedback control loop (See Soechtig, Abstract).

Applicant contends that Brown and Soechtig do not show the claimed invention because Brown does not teach anything with respect to volumetric flow rates. This is not

persuasive because, as has been previously noted, Brown was not cited to teach these limitations.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Monica A Huson/
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/Jennifer Michener/
Quality Assurance Specialist, TC1700

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SUPERVISORY PATENT EXAMINER